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EXAMINER

NATNAEL, PAULOS M

ART UNIT PAPER NUMBER

2614

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,765

Applicant(s)

KONUMA, YASUSHI

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figures **1,2A, 2B, 3A-3C, and 4A-4B** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al., U.S. Pat. No. 6,208,385 in view of Admitted Prior Art (Figs. 1-4).

Considering claim **1**, Konishi et al., discloses the following claimed subject matter, note:

a) determining means for determining whether or not an input video signal is a signal of which a non picture portion is added to the periphery of an effective picture area, is met by the letterbox image detecting circuit, fig.1.

b) picture processing means for extracting a signal of the effective picture area from the input video signal, is also met by the letterbox image detecting circuit, fig.1, which detects the boundary of an image area and non-image area, so as to display the image area on a full screen according to the detection result but not to display the non-image area". (see Abstract)

c) adjusting the picture size using the signal of the effective picture area, is met by Fig. 19b where a vertically expanded image of that of the Fig. 19A is illustrated. (col. 21, lines 14-42)

Except for;

d) combining the picture when the determined result of said determining means represents that the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area;

Regarding d), the reference of Konishi et al. does not specifically disclose combining the picture with another picture or signal. However, as the admitted prior art (FIGs. 1-4) illustrates, combining one picture with another picture to produce a two-screen or split screen images, for example, is well known in the art. Specifically, Fig.1 of the APA discloses conventional picture displaying apparatus where two signals selected from the multiple input signals are digitized, processed, and combined together to generate two image signals on the CRT screen as shown in Fig.3C. Therefore, it would have been obvious to the skilled in the art to modify the system of Konishi et al by

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providing another signal or image in order to display a split screen or main signal and a sub signal on the screen of the TV or monitor so that the viewer might interchangeably display the desired signal as main signal and the other signal as sub signal or vice-versa, giving the viewer more flexibility or option of displaying the desired signals.

Considering claim 8, a picture processing method, comprising the steps of

(a) determining whether or not an input video signal is a signal of which a non-picture portion is added to the periphery of an effective picture area, is met by is met by the letterbox image detecting circuit, fig.1;

(b) extracting a signal of the effective picture area from the input video signal, is also met by the letterbox image detecting circuit, fig.1, which detects the boundary of an image area and non-image area, so as to display the image area on a full screen according to the detection result but not to display the non-image area". (see Abstract)

c) adjusting the picture size using the signal of the effective picture area, , is met by Fig. 19b where a vertically expanded image of that of the Fig.19A is illustrated.

Except for;

d) and combining the picture when the determined result at step (a) represents that the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area;

Regarding d), see rejection of claim 1(d).

4. Claims **1,3-8,10-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Markandey**, U.S. Pat. No. **6,340,992** in view of Admitted Prior Art (Figs. 1-4).

Considering claim **1**, Markandey discloses the following claimed subject matter, note:

a) determining means for determining whether or not an input video signal is a signal of which a non picture portion is added to the periphery of an effective picture area, is met by Signal Processor and Format Detection 202, fig.2, which "measures the characteristics of the video signal to determine if the video signal is letterboxed, and what portion of the video signal actually contains the desired image." (see col. 3, lines 46-50)

b) picture processing means for extracting a signal of the effective picture area from the input video signal, is also met by the signal processor and format detection 202, fig.2, which "After detecting the size and location of the desired image, the signal and format detection processor 202 scales the video signal 104 to optimally fill the useable area of the display device 116," (see col. 3, lines 50-54) and the scaled signal being "the desired portion of the video image" (see Abstract).

c) adjusting the picture size using the signal of the effective picture area, is met by the disclosure that "after detecting the size and location of the desired image, the signal and

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format detection processor 202 scales the video signal 104 to optimally fill the useable area of the display device 116." (see col. 3, lines 50-54)

Except for;

d) combining the picture when the determined result of said determining means represents that the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area;

Regarding d), Markandey does not specifically disclose combining the picture with another picture or signal.

The admitted prior art (FIGs. 1-4) disclose conventional picture displaying apparatuses. Specifically, Fig.1 discloses an apparatus where two signals selected from the multiple input signals are digitized, processed, and combined together to generate two image signals on the CRT screen as shown in Fig.3C. Therefore, it would have been obvious to the skilled in the art to modify the system of Markandey by providing another signal or image in order to display a split screen or main signal and a sub signal on the screen of the TV or monitor so that the viewer might interchangeably display the desired signal as main signal and the other signal as sub signal or vice-versa, giving the viewer more flexibility or option of displaying the desired signals.

Considering claim 3, the picture processing apparatus as set forth in claim 1, wherein said picture processing means performs a reduced picture displaying process for reducing the picture size of the input video signal and combining the reduced picture on the background screen;

Regarding claim 3, Markandey discloses “after detecting the size and location of the desired image, the signal and format detection processor 202 scales the video signal 104 to optimally fill the useable area of the display device 116.” (see col. 3, lines 50-54) Markandey doesn’t reduce the picture size. However, the Admitted Prior Art discloses a process of reduction where Fig.3A is reduced in size to fit on the screen along side fig.3B, as shown in Fig.3C.

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Markandey by implementing the method of reduction in size of the image in order to fit two images on the screen so that the viewer utilizes the screen of the TV more flexibly or efficiently.

Considering claim 4, the picture processing apparatus as set forth in claim 1, wherein said determining means determines whether or not the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area corresponding to information of an interface to which the input video signal is input;

Regarding claim 4, Markandey does not specifically disclose a separate interface to which the input video signal is input. Markandey does not disclose the details of the signal processor and format detection circuitry. However, an interface between the receiver which receives the incoming signal and the signal processor and format detection circuitry 202 would have been obvious to the skilled in the art because a device or mechanism that relays/transmits the signal to different appropriate circuitry would be needed in order to process the signal faster.

Considering claim 5, the picture processing apparatus as set forth in claim 1, wherein said determining means determines whether or not the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area corresponding to information superimposed with or added to the input video signal, is met by the disclosure that "The signal and format detection processor 202 measures the characteristics of the video signal to determine if the video signal is letterboxed, and what portion of the video signal actually contains the desired image" (see col. 3, lines 46-50) which characteristics are included or superimposed on the input video signal.

Considering claim 6, the picture processing apparatus as set forth in claim 1, wherein said determining means detects a non signal portion of the input video signal and determines whether or not the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area.

See rejection of claim 1(a);

Considering claim 7, the picture processing apparatus as set forth in claim 1, wherein said determining means determines whether or not the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area corresponding to information contained in a transport stream that is transmitted;

Regarding Claim 7, Markandey does not specifically use the term "transport stream", but Markandey discloses "video stream" thusly: "A new technique has been

developed which automatically detects letterbox video formats and scales a video image to fit a non-letterbox video display area. The new technique not only optimizes the image scaling to fit a given display, it is also capable of detecting subtitles in the video stream" (col. 3, lines 17-22) which is suggesting that any other type of detecting information would also be contained in the video stream. [emphasis added]

It would have been therefore obvious to the skilled in the art at the time the invention was made to modify the system of the Markandey by providing the method of including detection information of the display format so that based on the information contained in the video stream the system would detect the type of format, be it letter-box display format or other type of display format.

Considering claim 8, a picture processing method, comprising the steps of

(a) determining whether or not an input video signal is a signal of which a non-picture portion is added to the periphery of an effective picture area, is met by the disclosure "The signal and format detection processor 202 measures the characteristics of the video signal to determine if the video signal is letterboxed, and what portion of the video signal actually contains the desired image." (see col. 3, lines 46-50)

(b) extracting a signal of the effective picture area from the input video signal, is also met by the signal processor and format detection 202, fig.2, which "After detecting the size and location of the desired image, the signal and format detection processor 202 scales the video signal 104 to optimally fill the useable area of the display device 116,"

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(see col. 3, lines 50-54) and the scaled signal being "the desired portion of the video image" (see Abstract).

c) adjusting the picture size using the signal of the effective picture area, is met by the disclosure that "after detecting the size and location of the desired image, the signal and format detection processor 202 scales the video signal 104 to optimally fill the useable area of the display device 116." (see col. 3, lines 50-54)

Except for;

d) and combining the picture when the determined result at step (a) represents that the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area;

Regarding d), see rejection of claim 1(d).

Considering claim **10**, the picture processing method as set forth in claim 8, wherein step (b) is performed by reducing the picture size of the input video signal and combining the reduced picture on the background screen.

See rejection of claim 3;

Considering claim **11**, the picture processing method as set forth in claim 8, wherein step (a) is performed corresponding to information of an interface to which the input video signal is input.

See rejection of claim 4;

Considering claim **12**, the picture processing method as set forth in claim 8, wherein step (a) is performed corresponding to information superimposed with or added to the input video signal.

See rejection of claim 5;

Considering claim **13**, the picture processing method as set forth in claim 8, wherein step (a) is performed by detecting a non-signal portion of the input video signal and determining whether or not the input video signal is a signal of which a non-picture portion is added to the periphery of the effective picture area.

See rejection of claim 6;

Considering claim **14**, the picture processing method as set forth in claim 8, wherein step (a) is performed corresponding to information contained in a transport stream that is transmitted.

See rejection of claim 7;

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5. Claims **2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Markandey**, U.S. Pat. No. **6,340,992** in view of **Admitted Prior Art (APA)** further in view of **Hiroi**, U.S. Pat. No. **6,204,887**.

Considering claim **2**, the picture processing apparatus as set forth in claim 1, wherein said picture processing means performs a multiple-picture displaying process for adjusting the picture sizes of a plurality of input video signals of a plurality of sources and combining pictures corresponding to the plurality of input video signals of the plurality of sources on the background screen.

Regarding claim 2, the combination of Markandey and the APA does not specifically disclose multiple picture displaying process and adjusting the picture size of the plurality of input video signals. However, it is well known in the art for a picture processing means to perform a multiple-picture displaying process, adjust or scale the picture sizes of the plurality of input video signals of a plurality of sources and combining the pictures. In that regard, Hiroi discloses method and apparatus for decoding and displaying multiple images using a common processor. Hiroi teaches Fig.3A & 3B which illustrate a display device including a screen having a plurality of windows in which images from different video programs (TV program 1, 2, and 3) are displayed at the same time.

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the combination of the system of Markandey and the APA as shown above in claim 1, by providing the methods of Hiroi for decoding and

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displaying multiple images, in order for the combined system to be more useful, compact and less costly for the user by processing multiple pictures using one processor.

Considering claim 9, the picture processing method as set forth in claim 8, wherein step (b) is performed by adjusting the picture sizes of a plurality of input video signals of a plurality of sources and combining pictures corresponding to the plurality of input video signals of the plurality of sources on the background screen.

Regarding claim 9, see rejection of claim 2;

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamagata et al., U.S. Patent No. 6,226,046 discloses a video signal discriminating circuit and television receiver.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-HELP.

Paulos Natnael
January 6, 2004



PAULOS M. NATNAEL
PATENT EXAMINER